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CSC 3320 System-Level Programming Lab

Lab Assignment# 4 Post Lab

1. The command: grep -E ‘Towns|Union’ mountainList.txt

Text

Description automatically generated

1. The command used is: grep ‘Rabun’ mountainList.txt | wc -l

Text

Description automatically generated

1. The command used here is: grep -c ‘Rabun’ mountainList.txt

Graphical user interface, text

Description automatically generated

1. A. Text

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B.

Text

Description automatically generated

C. The “-n” option of the utility sed suppresses automatic printing of pattern space. Since “sed” changes text during an input stream from a pipeline, the command by default prints all processed input. Because of this the new, changed output text is displayed along with the automatic printing of the input. This causes the output to be displayed twice. The “-n” just suppresses this processed input to only display one version of the text, the output.

D. Since the command “sed” is used to perform basic text transformations, the command in line (B) took the words “ridge high point” from the text mountainList.txt and replaced it with the text “r.h.p.”. The command “sed” makes one pass over the inputs and filters text (r.h.p) into the pipeline.

5) The command used for getting rid of white spaces is: sed ‘s/^ \*//’ mountainList.txt

A screenshot of a computer

Description automatically generated

1. When saving the output to a new file named newList.txt, the same command is done but the output is redirected to that new file. So, the command looks like:

sed ‘s/^ \*//’ mountainList.txt > newList.txt

Text

Description automatically generated

1. In order to list all the lines in the file mountainList.txt that have a space at the beginning, I deleted all the lines with an uppercase alphabetic character [A-Z] at the beginning.

The command I typed is:

sed ‘/^[A-Z]/d’ mountain.txt

A screenshot of a computer

Description automatically generated

1. The command to delete all lines in the text mountainList.txt that contain the string ‘Union’ is:

sed ‘/Union/d’ mountainList.txt

Text

Description automatically generated

9)

Text

Description automatically generated

1. To finish the command in part 9 using awk, I just printed the first and the last line using the command: awk -F, ‘{print $1 “, “ $5}’ mountainList.txt

Here the “,” by the “-F” represents the field separator to be used is a comma. The dollar signs before the 1 and 5 represent the specified fields to be printed and the “, “ in between the field number prints a comma in between the fields.

Text

Description automatically generated

1. To insert a text into the text file mountainList.txt using sed, I first had to create a sed script and store it in a file called “sedtext1”. Inside the file I first entered “1i/” as an insert command for sed, then I entered the text, and lastly I put a slash “\” to indicate the end of the text that I want to be entered. After the sed script file is complete, I can use the command: sed -f sedtext1 mountainList.txt which will insert the script into the mountainList.txt file using the “-f” option.

Text

Description automatically generated

1. Considering the sort utility in UNIX by default sorts lines in ascending order and the names of the mountains are the first field in the file mountainList.txt, no extra options are needed to sort the text file. The command used here is: sort mountainList.txt

Text

Description automatically generated

1. When sorting the list of mountains from descending order first the “-t” option needs to be used to specify an alternative field separator, in this case a comma. Then the “-r” option is utilized to reverse the ascending order of the sort to descending order. Once these are in place the field separator number needs to be indicated to tell UNIX which field to sort the lines in the text by. Since the sort utility orders each field starting from 0, and the field we need to sort by is the mountain height then the field number index is 2. The “+” in front of the 2 indicates the beginning of the field to sort at. The “-3” indicates the end field to sort at which is field 3. Lastly the “n” option is utilized to support the sortation of numerical values. So the command entered should be: sort -t, -r +2 -3 -n mountainList.txt

Text

Description automatically generated

Text

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15)

Text

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